

BURKART (J.L.)

REMOVAL OF THE RIGHT CLAVICLE, MANUBRIUM, AND GLADIOLUS.

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Removal of the clavicle and some part of the sternum has been practiced since 1732.

Remmer excised the clavicle in 1732, for malignant disease.

Dr. McCreary, of Kentucky, removed a clavicle in 1811.

Agnew has tabulated thirty-four cases of extirpation of clavicle. See Vol. II, f. 247, of his *Surgery*.

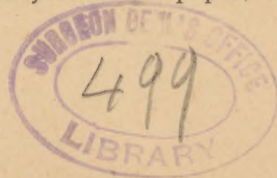
Dr. Parkes is the author of a very interesting and instructive article on the subject, which may be consulted in *Journal of American Medical Association*, Vol. XII, f. 205.

The Annals of Surgery, Vol. VIII, f. 232, *American Journal of Medical Sciences*, Vol. LXXXVII, f. 590, and, undoubtedly, some other journals, which I have not had access to, contain information on this subject.

I find in all seventy cases reported; of these, fourteen operations were performed after traumatism, with nine recoveries. The others were for tumors, malignant and otherwise, and necrosis. A number of these cases were only partial removals of the bone.

Dr. F. J. Groner, of Grand Rapids, and myself removed a portion of clavicle and sternum for necrosis from a man over sixty-five years old, with good success, about five years ago. I have failed to find any record of *complete* extirpation of clavicle, and upper portions of the sternum, manubrium, and gladiolus; and, inasmuch as my case, about to be reported, seems to be a novel one, I deemed it worthy of presentation to this section.

On the 24th day of October, 1891, I was called to Woodville, a small lumbering village in Newaygo county, Mich., in consultation with Dr. J. H. Walling, of that place, and Dr. Ruggles, of White Cloud, to see the subject of this paper, Mr.



H. H., a robust man, about thirty-five years of age, who had been accidentally shot—self-inflicted—in the right clavicular region.

The wound was made with an ordinary double-barreled shot-gun, loaded with No. 4 birdshot, and was in close contact with the person, when discharged. I found the patient in a log-house, situated in the woods, with clothing, etc., unremoved; mud, and other foreign matter covering the clothing around the wound, and blood everywhere on upper part of person. The wound, a ragged, ugly-looking one, as you may well suppose, about three inches in diameter, filled with pieces of clothing, gun wad, etc.

I very carefully made a superficial examination of wound, and detected no indications of injury to any important blood vessel, but did not deem it advisable to attempt to dress the wound until patient was placed in some convenient building, where the opportunity for thorough investigation would be afforded. Inasmuch as the patient did not exhibit signs of serious loss of blood, I suggested his removal to the Mercy Hospital, Big Rapids, Mich., a distance of twenty miles.

This was agreeable to the other medical gentlemen and patient and, therefore, patient was conveyed on a spring wagon to hospital. After sufficient time for rest from fatigue of journey had been given patient, he was placed upon the operating table, chloroform administered, and with the able assistance of my *confrère*, Dr. W. T. Dodge, and Drs. Walling and Ruggles, I proceeded to examine the wound.

I discovered that the entire charge of shot had been directed upwards against clavicle, fracturing that bone, and was then deflected. A portion of the charge passed above the bone, and was buried in the muscle, another portion was directed backward and inward, and several shot passed into upper part of lung and large bronchial tube, as patient was spitting blood, when first seen, and continued to do so for twenty-fours after injury. Several shots appeared in sputa about forty-eight hours afterwards.

No alarming bleeding took place during the examination.

After cleansing wound thoroughly with solution of Hg

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D. Appleton & Co.,
Magazine Dept.,
New York.

Dear Mr. Jones:-

Enclosed please find a pamphlet containing the report of what Dr. Burkhardt considers a very unusual case and then thinks deserving of mention in the N.Y. Medical Journal. I believe if this could be published in the Journal, it would help the Medical Journal business in Michigan, but I leave the matter wholly to you to act as you think best.

Yours truly,



K.

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Yours truly,

get Journal business in Michigan, and I leave the matter wholly
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report of what Dr. Buckner's associates in New England are and the
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Dear Mr. Jones:-

New York.

My dear Mr. Jones,

D. Appleton & Co.,

Nov. 21, 1883.

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bichlor. 1-3000, and giving the soft tissues close examination, I discovered that the injury to bone was more extensive than first supposed, and would not, in all probability, unite kindly and would furthermore be a source of great danger, by necrosis of bone, and all the sequelæ which it implies. Therefore, we decided to remove the clavicle entirely. Accordingly, I made an incision, following the anterior surface of clavicle to its articulation with scapula, and carefully dissected that portion out. The same course was pursued with the sternal portion, and wound was thoroughly irrigated with bi-chloride solution, 1-5000, and the freshly cut surfaces brought together and closed with silk-worm gut sutures, drainage tubes placed in position, and wound dusted with iodoform and dressed with antiseptic gauze.

The patient did remarkably well. Wound—that is, the portion which had been made by my knife—healed by first intention, and balance took on healthy granulation.

Three weeks from day of operation, patient was up and able to walk around. Could use his arm very little.

About the fourth week complained of pain in opposite shoulder, which was tender and somewhat swollen. Temperature rose to 101° and marked chill occurred shortly afterwards. An examination under chloroform revealed the presence of a large piece of gun wad and about fourteen shot, which had become imbedded in tissue, behind sternum, at its upper border, near the articulation of left clavicle with sternum, and which was not perceptible by sight or touch at time of primary operation. The bone (sternum) was diseased, and also portion of articulation. Diseased part was removed by forceps, spoon, etc., and wound packed with Balsam Peru, and result awaited. Tonics, quinine, iron, etc., administered, and for a time outlook was encouraging.

Within four weeks, it became apparent that more of the sternum was being destroyed, and patient was again placed on table with firm determination on my part to remove all dead bone, or the patient, I was not sure which. Consequently, I made an incision in the median line from upper part to within one and a-half inches of top of appendix, and removed every vestige of bone that had any suspicious appearance, and some that was healthy. Wound was closed, with drainage tube

inside, and dressed every day with iodoform, boracic acid, and red wash, as the occasion demanded.

Shot and a portion of gun wad, (^{once} ~~ounce~~), came away frequently, and in all, from time of first examination to date of recovery, about March 1st, 1892, patient has got rid of nearly forty shot.

The most remarkable part of the history of this case is that the patient has complete use of his arm and does not seem to suffer any inconvenience from loss of his clavicle or sternum, upper two-thirds.

No alarming bleeding ever took place, except one night after second operation, when the night watchman, in making his round, discovered patient in a pool of blood which, however, was checked before my arrival and never took place again. Recovery is now complete, and patient is pursuing his daily vocation.

In answer to Dr. Graves, of Grand Rapids, I will say that *all* the manubrium and gladiolus was removed, articular surfaces with ribs and left clavicle included.

Since above was published
I have had an opportunity
to examine the patient, and
he has full use of arms,
says he never suffers any difficulty
and can lift as much as he
could before operation, follows
mill business in Pine Woods

J. W. L.

Nov 18/1893-

